This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A Cartesian loop transmitter ~~(100) comprising~~ having a forward path ~~(102)~~ and a feedback path ~~(104)~~, each of these paths comprising an I-channel and a Q-channel, as well as an isolator eliminator, ~~(106) **characterized in that**~~ said transmitter ~~(100)~~ comprising:
   a) a first low pass filter ~~(138)~~ and a first wide band pass filter ~~(142)~~ connected to said I-channel at LP2;
   b) a second low pass filter ~~(140)~~ and a second wide band pass filter ~~(144)~~ connected to said Q-channel at LP2;
   c) a first root mean square detector ~~(150)~~ collecting signal from said first wide band pass filter ~~(142)~~ and from said second wide band pass filter ~~(144)~~;
   d) a second root mean square detector ~~(152)~~ collecting signal from said first low pass filter ~~(138)~~ and from said second low pass filter ~~(140)~~;
   e) a first divider ~~(156)~~ connected to said first and said second root mean square detectors ~~(150 and 152)~~;
   f) a means for comparing ~~(160)~~ connected to said first divider ~~(156)~~ and to
   g) a ~~microprocessor (162)~~ digital system connected to input attenuators ~~(108 and 110)~~ on said I- and Q-channels.

2. (currently amended) The Cartesian loop transmitter according to claim 1 further comprising:
   a) a first narrow band pass filter ~~(146)~~ connected to said I-channel at LP2;
   b) a second narrow band pass filter ~~(148)~~ connected to said Q-channel at LP2;
   c) a third root mean square detector ~~(154)~~ collecting signal from said first narrow band pass filter ~~(146)~~ and from said second narrow band pass filter ~~(148)~~;
   d) a second divider ~~(158)~~ connected to said second and said third root mean square detectors ~~(152 and 154)~~ and to said means for comparing ~~(160)~~.

3. (currently amended) The Cartesian loop transmitter according to claim 1 ~~or 2~~ wherein a memory ~~(164)~~ is connected to said ~~microprocessor (162)~~digital system.

4. (currently amended) The Cartesian loop transmitter according to ~~any one of preceding claims~~ claim 1 wherein a generator ~~(166)~~ is connected to said ~~microprocessor (162)~~digital system.

5. (original) The Cartesian loop transmitter according to claim 4 wherein said generator is a sine wave generator.

6. (currently amended) A method of adjusting an output level of a Cartesian loop transmitter ~~(100)~~ in a digital radio system, the method comprising the steps of:
   a) generating a small signal ~~(200)~~ at a predefined frequency offset;
   b) applying a factory predefined attenuation setting ~~(202)~~ for adjusting said output level if attenuation setting for a previous slot is not available ~~(201)~~, or
   c) applying said attenuation setting obtained in previous ~~(204)~~ slot for adjusting said output level in a current slot;
   d) measuring an on-channel baseband signal level ~~(212)~~ at LP2;
   e) measuring said small signal level ~~(214)~~ at a predefined frequency offset at LP2;
   f) calculating a first ratio ~~(218)~~ of said small signal level to said on-channel baseband signal level; and
   g) increasing an attenuation setting ~~(224)~~ of an input signal if said first ratio is above a first threshold ~~(220)~~;
   h) storing ~~(232)~~ said attenuation setting in a memory.

7. (currently amended) The method according to claim 6 wherein said small signal level is measured after filtering in a wide band pass filter ~~(205.2)~~.

8. (currently amended) The method according to claim 6 ~~or 7~~ wherein said on-channel signal level is measured after filtering in a low pass filter ~~(205.1)~~.

9. (currently amended) The method according to ~~any one of claims 6 to 8~~ claim 6 further comprising steps:

e1) measuring said small signal level ~~(216)~~ after filtering in a narrow band pass filter ~~(205.3)~~ at said predefined frequency offset at LP2;

f1) calculating a second ratio ~~(218)~~ of said small signal level after filtering in said narrow band pass filter to said on-channel baseband signal level; and

g1) reducing said attenuation setting ~~(228)~~ of an input signal if said second ratio is below a second threshold ~~(222)~~.

10. (currently amended) The method according to ~~any one of claims 6 to 9~~ claim 6 wherein steps d) through h) are repeated in a loop ~~until~~ while said first ratio and said second ratio are between said first and said second thresholds and ~~until~~ while there is a modulated signal to transmit.

11. (currently amended) The method according to ~~any one of claims 6 to 10~~ claim 6 wherein for determining said first or said second ratio root mean square values of said on-channel baseband signal level ~~(212)~~ and a root mean square of said small signal level ~~(214 and 216)~~ are taken.

12. (currently amended) The method according to ~~any one of claims 6 to 11~~ claim 6 wherein after increasing said attenuation setting a first delay is applied ~~(226)~~ to execution of software, which based on next samples, calculates said first and said second ratio and increases said attenuation setting.

13. (currently amended) The method according to ~~any one of claims 6 to 11~~ claim 6 wherein after reducing said attenuation setting a second delay is applied ~~(230)~~ to execution of software, which based on next samples, calculates said first and said second ratio and ~~increases~~ reduces said attenuation setting.

14. (currently amended) The method according to ~~any one of claims 6 to 13~~claim 6 wherein said small signal is generated on a level significantly below said on-channel signal level.

15. (currently amended) The~~A radio~~ transmitter according to ~~any one of claims 1 to 5 and which~~ claim 1 wherein the transmitter is operable to provide communications in at least one of the following communication systems: TETRA, ~~and/or~~ GSM, and~~/or~~ IDEN ~~communication systems~~.

16. (cancelled)

17. (cancelled)